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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,463	01/17/2002	Laura Dickey	100200145-1	3691
22879 7590 11/25/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER BUL, HANH THI MINH				
ART UNIT 2192		PAPER NUMBER		
NOTIFICATION DATE 11/25/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/053,463

Applicant(s)

DICKEY ET AL.

Examiner

HANH T. BUI

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

1. Applicant's amendment dated July 16th, 2008 responding to the February 8th, 2008 Office Action provided in the rejection of claims 1-23.
2. Claims 1, 9, and 20 have been amended.
3. Claims 1- 23 are pending in the application, of which claims 1, 9, 15 and 20 are in independent form and which have been fully considered by the examiner.

Response to Amendment

4. The 35 USC § 112 rejection of claims 20-23 have been withdrawn in view of Applicant's amendments to the claims.
5. The objection of drawing has been withdrawn in view of Applicant's submission of new drawing.

Response to Arguments

6. Applicants' arguments filed on July 16th, 2008 based on amended claims, have been considered but are moot in view of the new ground(s) of rejection. See *Peev et al.* (Pub. No. 2003/0121033- art made of record) in view of *Ross* (US Patent 6,163,780) in detail below.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-5, 8-13, 15-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peev et al. (Pub. No. 2003/0121033 – hereinafter, Peev) in view of Ross (US Patent 6,163,780 – hereinafter, Ross).**

Regarding claim 1:

Peev discloses installing software on a mobile computing device:

- *installing said concentrated application in concentrated form in non-volatile memory of said target device.*

(FIG. 3 and associated text, such as, "The **installation file** contains one or more files that are to be installed on the mobile computing device (also called herein 'files to be installed'), as well as computer-executable instructions for installing the files (also called herein 'installation instructions'" (See par. [0028]).

"installer 302 extracts the files 503 to be installed (assuming **they were in compressed form**) ... The installer 302 also parses the installation instructions 501 to the configuration manger ... the configuration manager 303 may directly execute in the installation instructions (**installing ... in concentrated form**)" (emphasis added – See par. [0056]).

But, Peev does not explicitly teach:

- *receiving said application in said target device in unconcentrated form.*
- *concentrating said application in said target device;*

However, Ross discloses in Fig. 1, 2 and associated text, such as, "The bytecode to be condensed (***unconcentrated application***) may also be transmitted (***received on***) on-the-fly to the data processing system 40 (***target device***), which in turn **concentrates** the bytecode on-the-fly and re-transmits the condensed bytecode." (emphasis added – See Col. 5: 20-22).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Ross into the teachings of Peev because such combination would have

Regarding claim 2:

Peev and Ross disclose *the method of claim 1,*

- *wherein said concentrating and installing of said application are contemporaneously performed.*

(Peev discloses in FIG. 3 and associated text, such as, "installer 302 extracts the files 503 to be installed (assuming they were in compressed form), and then **stores them in memory 212**. The installer 302 also parses the installation instructions 501 to the configuration manger ... the configuration manager 303 may directly **execute in the installation instructions**" (emphasis added – See par. [0056]).

On the other hand, Ross discloses in Fig. 2 and associated text, such as, "the bytecode 72 to be concentrated is **stored** in the **nonvolatile memory 70**" (emphasis added – See Col. 5: 24-25),

"A segment within the volatile memory 65 may preferably be allocated for **performing the condensing operation**" (emphasis added – See Col. 6: 36-37).

Examiner noted that it would have been obvious to one having ordinary skill in the art at the time of the invention to use working space such as volatile memory to do the concentrating operation and install the application permanently in the non-volatile memory storage. Therefore, both operations are contemporaneously performed.).

Regarding claim 3:

Peev and Ross disclose *the method of claim 1, further comprising*

- *receiving said application via a network with which said target device is communicating.*

(Ross further discloses in Fig. 2 and associated text, such as, "The bytecode to be condensed (**unconcentrated application**) may also be transmitted on-the-fly (**communicating**) to the data processing system 40 (**target device**)" (emphasis added – See Col. 5: 20-21).

Regarding claim 4:

Peev and Ross disclose *the method of claim 1, further comprising*

- *copying said application from non- volatile memory of said target device to volatile memory of said target device prior to said concentrating of said application.*

(Ross further discloses in Fig. 2 and associated text, such as, "the bytecode 72 to be concentrated is **stored** in the **nonvolatile memory 70**" (emphasis added – See Col. 5: 24-25).

"A segment within the volatile memory 65 may preferably be allocated for **performing the condensing operation.**" (emphasis added – See Col. 6: 36-37).

Examiner noted that it would have been obvious to one having ordinary skill in the art at the time of the invention to copy the unconcentrated application from non-volatile memory to a working space such as volatile memory to do the concentrating operation.).

Regarding claim 5:

Peev and Ross disclose *the method of claim 1, further comprising:*

- *copying said application from a non-volatile removable data storage device to volatile memory of said target device prior to said concentrating of said application.*

(Ross further discloses in Fig. 2 and associated text, such as, "As illustrated in FIG. 2, a typical data processing system 40 includes a central processing unit (CPU) 50... **non-volatile memory 70 (such as disk drives, CD-ROMs, flash memory, or data tape)**" (emphasis added – See Col. 4: 53-57).

"the bytecode 72 to be concentrated is **stored** in the **nonvolatile memory 70**" (emphasis added – See Col. 5: 24-25)

"A segment within the volatile memory 65 may preferably be allocated for ***performing the condensing operation.***" (emphasis added – See Col. 6: 36-37).

Examiner noted that it would have been obvious to one having ordinary skill in the art at the time of the invention to copy the unconcentrated application from non-volatile memory to a working space such as volatile memory to do the concentrating operation.).

Regarding claim 8:

Peev and Ross disclose *the method of claim 1, further comprising*

- *executing said concentrated application prior to said step of installing.*

(Peev further discloses in FIG. 3 and associated text, such as, "installer 302 extracts the files 503 to be installed (assuming they were in compressed form), and then ***stores them in memory 212.*** The installer 302 also parses the installation instructions 501 to the configuration manger ... the configuration manager 303 may directly ***execute in the installation instructions***" (emphasis added – See par. [0056])).

Regarding claim 9:

This is another program version of the rejected claim 1 above, wherein all the limitations of this claim have been noted in the rejection of claim 1.

Regarding claim 10:

The rejection of base claim 9 is incorporated. All the limitations of this claim have been noted in the rejection of claim 2.

Regarding claim 11:

The rejection of base claim 9 is incorporated. All the limitations of this claim have been noted in the rejection of claim 3.

Regarding claim 12:

The rejection of base claim 9 is incorporated. All the limitations of this claim have been noted in the rejection of claim 4.

Regarding claim 13:

The rejection of base claim 9 is incorporated. All the limitations of this claim have been noted in the rejection of claim 5.

Regarding claim 15:

This is another system version of the rejected claim 1 above, wherein all the limitations of this claim have been noted in the rejection of claim 1.

Regarding claim 16:

The rejection of base claim 15 is incorporated. All the limitations of this claim have been noted in the rejection of claim 2.

Regarding claim 17:

The rejection of base claim 15 is incorporated. All the limitations of this claim have been noted in the rejection of claim 4.

Regarding claim 18:

The rejection of base claim 15 is incorporated. All the limitations of this claim have been noted in the rejection of claim 8.

Regarding claim 20:

Peev does not explicitly teach *non-volatile memory*, but Ross discloses a typical data processing system, and further discloses in FIGs. 1, 2 and associated text, such as, "Typical data processing systems which may be used include personal computers, work stations, palm computers, personal digital assistants (PDAs) or even mainframe computers" (See Col. 4: 43-46).

"a typical data processing system 40 includes a central processing unit (CPU) 50. The CPU 50 is optionally connected via a bus 60 to, among other things, a volatile memory 65 (e.g., a RAM), *non-volatile memory* 70 (such as disk drives, CD-ROMs, flash memory, or data tape) ..." (emphasis added – See Col. 4: 53-57)

All other limitations of this claim have been noted in the rejection of claim 1.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6, 7, 14, 19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peev et al. (Pub. No. 2003/0121033 – hereinafter, Peev) in view of Ross (US Patent 6,163,780 – hereinafter, Ross) and further in view of Audio Video & Broadcasting Studio Systems (NDS and HP Integrate HP Microchaivm technology to provide a Java solution for Digital TV - published on Nov-Dec 2001 - hereinafter, Broadcast News).

Regarding claim 6:

Peev and Ross disclose *the method of claim 1*, but Peev and Ross do not explicitly teach:

- wherein said installing of said application further comprises storing said application in concentrated form in a virtual machine data store.

Broadcast News discloses "MicrochaiVM software allows us to do this by **minimizing the application size ...**" (emphasis added – See Col. 2: 5-11).

"MicrochaiVM software is designed to enable Java applications to be dynamically downloaded onto resource-constrained devices in bandwidth-restrained network environments. By using HP **Chaifreezedry patented software algorithms**, which is **part of HP's Microchai VM environment**, Java **application memory** requirements are

reduced with no loss in application performance" (emphasis added – See Col. 2: 25-Col. 3: 6).

Examiner noted that it would have been obvious to one having ordinary skill in the art at the time of the invention to store application in concentrated form in a virtual machine data store since Java virtual machine (JVM) is a virtual "execution engine" instance that executes the bytecodes in Java class files on a microprocessor.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Broadcast News into the teachings of Peev and Ross because such combination would have enabled Java and Web-based service capabilities in intelligent appliances such as set-top boxes, smart handhelds, mobile phones, automotive telematics systems, and printers as suggested by Broadcast News (See Col. 3: last par. - Col. 4: 6).

Regarding claim 7:

Peev and Ross disclose *the method of claim 1*, but Peev and Ross do not explicitly teach:

- *executing said application in concentrated form with a virtual machine running on said target device.*

Broadcast News discloses "MicrochaiVM software is designed to enable Java applications to be dynamically downloaded onto resource-constrained devices in bandwidth-restrained network environments. By using HP **Chaifreezedry patented software algorithms**, which is **part of HP's Microchai VM environment**, Java

application memory requirements are **reduced** with no loss in application performance." (emphasis added – See Col. 2: 25-Col. 3: 6).

Examiner noted that it would have been obvious to one having ordinary skill in the art at the time of the invention to store application in concentrated form in a virtual machine data store since Java virtual machine (JVM) is a virtual "execution engine" instance that executes the bytecodes in Java class files on a microprocessor.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Broadcast News into the teachings of Peev and Ross because such combination would have enabled Java and Web-based service capabilities in intelligent appliances such as set-top boxes, smart handhelds, mobile phones, automotive telematics systems, and printers as suggested by Broadcast News (See Col. 3 last paragraph through Col. 4: 6).

Regarding claim 14:

The rejection of base claim 9 is incorporated. All the limitations of this claim have been noted in the rejection of claim 6.

Regarding claim 19:

The rejection of base claim 15 is incorporated. All the limitations of this claim have been noted in the rejection of claim 7.

Regarding claim 21:

The rejection of base claim 20 is incorporated. All the limitations of this claim have been noted in the rejection of claim 7.

Regarding claim 22:

The rejection of base claim 20 is incorporated. All the limitations of this claim have been noted in the rejection of claim 6.

Regarding claim 23:

Peev and Ross disclose *the device of claim 22*, but Peev and Ross do not explicitly teach:

- *a plurality of concentrated applications stored in said virtual machine data store.*

Broadcast News discloses "MicrochaiVM software is designed to enable Java applications (***plurality of application***) to be dynamically downloaded onto resource-constrained devices in bandwidth-restrained network environments. By using HP **Chaifreezedry patented software algorithms**, which is **part of HP's Microchai VM environment**, Java **application memory** requirements are **reduced** with no loss in application performance." (emphasis added – See Col. 2: 25-Col. 3: 6).

Examiner noted that it would have been obvious to one having ordinary skill in the art at the time of the invention to download a plurality of applications and store applications in concentrated form in a virtual machine data store since Java virtual

machine (JVM) is a virtual "execution engine" instance that executes the bytecodes in Java class files on a microprocessor.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Broadcast News into the teachings of Peev and Ross because such combination would have enabled Java and Web-based service capabilities in intelligent appliances such as set-top boxes, smart handhelds, mobile phones, automotive telematics systems, and printers as suggested by Broadcast News (See Col. 3 last par. - Col. 4: 6).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh T. Bui whose telephone number is (571) 270-1976. The examiner can normally be reached on 9:30 AM - 4:30PM / Monday-Thursday.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. T. B./
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192